

uso de EE 30 µg e desogestrel 150 µg (Akerlund, 1993). Muitos ACO contendo baixa dose de estrogênio resultaram em altas taxas de descontinuação (global e através de eventos adversos como sangramento irregular). Mulheres em uso de EE 20 µg e desogestrel 150 µg tiveram um OR de descontinuação através de sangramento irregular igual a 2.59 (95% IC 1.35 a 5.00) em relação ao grupo de mulheres em uso de EE 30 µg e desogestrel 150 µg (Akerlund 1993). **CONCLUSÕES:** Reduzir a concentração de estrógenos para melhorar a segurança pode resultar em baixa adesão em função de mudanças inaceitáveis nos padrões de sangramento.

## PIH2

### COST EFFECTIVENESS EVALUATION OF A ROTAVIRUS VACCINATION PROGRAM IN ARGENTINA

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**OBJECTIVES:** Rotavirus diarrhea is one of the most important vaccine-preventable causes of severe diarrhea in children worldwide. There are two vaccines licensed Rotarix<sup>®</sup> (monovalent attenuated human rotavirus strain) by GlaxoSmithKline and RotaTeq<sup>®</sup> (pentavalent live human-bovine reassortant vaccine) by MSD with similar results. This study aim was to evaluate the cost-effectiveness of incorporating monovalent rotavirus vaccine 2-dose scheme (Rotarix<sup>®</sup>) compared with the pentavalent vaccine 3-dose scheme (Rota-Teq<sup>®</sup>) in the national immunization schedule of Argentina. **METHODS:** A deterministic Markov model based on the lifetime follow up of a birth cohort was used. QALYs as an effect measure, health care system perspective and a 5% discount rate for health benefits and costs have been used. A review of the literature to obtain epidemiologic and resources utilization data was performed. The sources used to estimate the epidemiologic parameters were the National Health Surveillance System, the national mortality statistics and national database of hospital discharges records. Costs are expressed in local currency. PAHO 2012 Revolving Fund vaccine prices were used. **RESULTS:** Rotarix<sup>®</sup> prevented 177,254 rotavirus cases, 19,376 hospitalizations and 31 deaths while RotaTeq<sup>®</sup> prevented 165,022, 17,882 and 28 events respectively. Both vaccination strategies were less costly and more effective than the strategy without vaccination (total costs \$69,700,645 and 2,575 total QALYs lost). When comparing vaccination schemes Rotarix<sup>®</sup> was less expensive (\$ 60,174,508 vs. \$ 67,545,991 total costs) and more effective (1,105 vs. 1,213 total QALYs lost) than RotaTeq<sup>®</sup>, being the dominating strategy. Probabilistic sensitivity analysis showed results to be robust of being cost-effective at a WTP threshold of 1 GDP per capita when comparing the 2-dose scheme vs. no vaccination or the 3-dose scheme one. **CONCLUSIONS:** In Argentina both rotavirus vaccination schemes dominate the no vaccination strategy and RotaTeq<sup>®</sup> (3-dose scheme) was dominated by Rotarix<sup>®</sup> (2-dose scheme), being this results robust in the sensitivity analysis.

## PIH3

### ROLE OF ANTIOXIDANTS IN RECURRENT PREGNANCY LOSSES, LOW BIRTH WEIGHT, AND GESTATIONAL DURATION

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**OBJECTIVES:** To study the impact of antioxidants on the maternal and child health of women with Recurrent Pregnancy Loss (RPL) and healthy pregnancies. The three main variables studied for the purpose included (i) low birth weight (LBW), (ii) gestational duration (GD) and (iii) RPL with a history of RPL. **METHODS:** The study was conducted in two parts. Study 1 focused on the impact of antioxidants on mothers with RPL with a sample size of 123 mothers out of 200 cases. Study 2 focused on the impact of antioxidants on LBW and GD included a sample of 900 women with healthy pregnancy of 6 months. Each of the study groups were divided in to experimental (active arm) and control group (placebo arm). It was hypothesized that 1) Oral antioxidant supplementation will reduce the rate of recurrent pregnancy loss; 2) Oral supplementation of antioxidants during pregnancy will increase the birth weight of the child; and 3) Oral supplementation of antioxidants will decrease premature births. **RESULTS:** it was found in study 1 that antioxidant supplementation reduced the chances of RPL as the chances of conception in women in the active arm increased by 36%. Study 2 revealed that the chance of LBW was reduced by 15% in women that received antioxidant supplements and the average weight of their infants in the active arm increased by 0.30kg. It was found that the gestational period for women in the active arm increased by 12 days and they were 30 times more likely to give birth within their expected date of delivery (EDD). Lastly, it was also found that maternal and neonatal mortality was also reduced by 4.4% and 2.9% respectively. **CONCLUSIONS:** It is conclusion that antioxidants be made mandatory for normal pregnant women and especially women of RPL.

## PIH4

### CALIDAD DE PRESCRIPCIÓN DE ANTIBIÓTICOS EN EL SERVICIO DE PEDIATRÍA DE UN HOSPITAL GENERAL DE CÁRDENAS, TABASCO, MÉXICO

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**OBJECTIVOS:** Evaluar la calidad de la prescripción de antibióticos en el servicio de pediatría del Hospital General de Cárdenas, Tabasco, México, en el año 2010. **METODOLOGÍAS:** Estudio de utilización de medicamentos, de tipo transversal. Se estudió un universo de N=678 expedientes de pacientes atendidos durante 2010, se tomó una muestra probabilística simple (p=0.15, d=0.05, Z=1.6) de n=152 expedientes seleccionados sistemáticamente a intervalos de k=5. Se recopiló información sobre antibióticos prescritos, diagnóstico, uso del antibiótico y esquema terapéutico; se evaluó la calidad de la prescripción comparando el esquema prescrito contra las

guías de práctica clínica y la farmacopea Pediadosis. La información se sistematizó y analizó utilizando Epi Info versión 3.5.1 para Windows, se obtuvo estadística descriptiva. **RESULTADOS:** El 80.3% de los pacientes recibió antibióticos (n=122). La media de antibióticos prescritos fue 1.8, en un intervalo de 1-4, la moda fue 2. Diagnósticos más frecuentes: gastroenteritis 16.4% y bronconeumonía 9.8%. Uso de los antibióticos: profiláctico 2% y terapéutico 98%. Antibióticos más frecuentes: amikacina 37.4%, ampicilina 25.6% y dicloxacilina 13.7%. Vía de administración más frecuente: intravenosa 87%. La calidad de la prescripción fue inadecuada en 93%. Errores de prescripción más frecuentes (individuales): duración inadecuada 79.9%, dosis inadecuada 63% y medicamento inadecuado 57.5%. **CONCLUSIONES:** La calidad de prescripción de antibióticos en la unidad médica es preponderantemente inadecuada, se requieren estrategias de intervención educativas y gerenciales para dar solución al problema. Se sugiere evaluar la calidad de prescripción de otros grupos de medicamentos en todos los servicios médicos del hospital.

## INDIVIDUAL'S HEALTH – Cost Studies

## PIH5

### ANÁLISIS DE IMPACTO PRESUPUESTAL DEL USO DE LNG SIU COMO MÉTODO DE CONTRACEPCIÓN EN COLOMBIA

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**OBJETIVOS:** Analizar el impacto presupuestal de incorporar al Sistema Intrauterino Liberador de Levonorgestrel (SIU-LNG) en el sistema de salud colombiano como método de contracepción reversible de larga duración. **METODOLOGÍAS:** Tomando como referencia un modelo de costo-efectividad que muestra el beneficio del uso de SIU-LNG, se realizó un modelo de impacto presupuestal de la adición del SIU-LNG al sistema de salud. Tomando como referencia la población estimada en Colombia para 2012 y los datos de uso de estos métodos de planificación de la Encuesta Nacional de Demografía y Salud 2010, se estimó el impacto para una cohorte fija y con incremento poblacional del uso del SIU-LNG con una tasa de reemplazo anual del 30%, hasta 5 años, incluyendo costos directos de salud. Se realizó un análisis de sensibilidad univariado, realizando variaciones en la tasa de reemplazo. **RESULTADOS:** El impacto que tendría SIU-LNG para el sistema de salud como método de contracepción usando cohorte fija sería de USD\$ 30.422.297,03 (USD\$ 0,65 per cápita) en el primer año, disminuyendo anualmente hasta llegar a un impacto acumulado de USD\$ 0,31 per cápita a 5 años. Con incrementos anuales de población similar a la tasa de crecimiento poblacional, el impacto acumulado al quinto año sería de USD\$ 0,42 per cápita, correspondiente a USD\$ 19.969.830,10. Tomando como referencia el valor per cápita asignado para 2012, éste implicaría un impacto de 0,21% para el primer año, de -0,02% y -0,03% para el segundo año en cohorte móvil o fija, respectivamente. **CONCLUSIONES:** Los resultados muestran que la incorporación de SIU-LNG como método de planificación en el sistema de salud colombiano genera ahorro en el gasto a partir del segundo año en las condiciones del caso analizado y su impacto es bajo frente a los beneficios en calidad de vida que podría generar.

## PIH6

### A TIME-MOTION COMPARISON OF ITEMIZED TREATMENT COSTS IN FIRST VERSUS SUBSEQUENT CYCLES OF IN VITRO FERTILIZATION (IVF): TREATMENTS CAN OPTIMIZED FOR IMPROVING OUTCOMES WHILE INCREASING PATIENT VOLUMES IN COST-CONSTRAINED REGIONS

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**OBJECTIVES:** To analyze the differences in initial versus subsequent fresh in vitro fertilization (IVF) cycles with regard to personnel time, consumables and other resources. **METHODS:** A cross-sectional observational study of 120 patients. Observations were made during regular clinic hours in the clinical rooms of a UK fertility centre and its affiliated embryology department from January 1, 2002 to December 31, 2002. The average time per task was determined for each component of treatment by averaging the observed duration for five distinct observations. For each member of staff and each component of treatment, the total time (in hours) was estimated by multiplying the duration of attendance by a) the percentage of patients undergoing each treatment component and b) the frequency of attendance by each staff member, which allowed for the weighted average of personnel time and costs along with standard deviations to be calculated. **RESULTS:** When consumables were included, each initial cycle cost the clinic approximately £2246.57 +/- £151.01. The total amount of time patients spent with staff during subsequent fresh IVF cycles was much less than initial cycles, at 6.94 +/- 2.44 hours. The time spent with staff equated to £257.53 +/- £90.77, while each subsequent fresh cycle cost the clinic approximately £1813.12 +/- £90.77. A total of 9.77 +/- 4.94 more staffing hours were spent with patients during initial IVF cycles compared to subsequent fresh IVF cycles. This decrease in staffing time created a £319.52 +/- £176.19 difference between initial and subsequent fresh cycles, while the diminished use of consumables on subsequent treatment cycles accounted for a cost-reduction of £113.93. Thus, subsequent fresh IVF cycles were, on average, £433.45 +/- £176.19 less than initial cycles. **CONCLUSIONS:** The details of our study give insight, particularly in cost-constrained regions, how clinic management may be conducted in a cost-efficient manner.

## PIH7

### COSTO-EFECTIVIDAD DE CARBETOCINA EN COMPARACIÓN CON OXITOCINA PARA PREVENIR HEMORRAGIA POSPARTO POR ATONÍA UTERINA EN PACIENTES CON FACTORES DE RIESGO EN COLOMBIA

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**OBJECTIVOS:** La hemorragia postparto (HPP) es la principal causa de mortalidad materna, el 75% de los casos de HPP son causados por atonía uterina, por lo